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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,873	12/03/2004	Klaus Kespohl	915-006.064	6807

4955 7590 04/20/2006

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ART UNIT PAPER NUMBER

2617

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



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1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5, 6, 8, 9, 12, 14, 16, 17 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Khoo (US 6,867,965).

Regarding claim 1, Khoo teaches a mobile communication device (see Abstract and fig.2A, item 202 and 204 as a single unit), comprising: a set of keys organized as a keyboard (see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit), wherein each key of said set of keys has a first assigned function for entering alphanumeric text (see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see QWERTY and 0-9, \*, #), at least a subset of keys included in said set of keys and arranged in a pre-determined configuration (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see QWERTY and 0-9, \*, #), wherein each key of said subset each as a second assigned function for entering alphanumeric text (also see

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fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see QWERTY and 0-9, \*, #), and a first selection of keys provided for entering numbers and telephone number related symbols in accordance with said second assigned function (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see 0-9, \*, # for entering numbers and telephone number related symbols as claimed), wherein said first selection of keys is compressed by said subset of keys (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see 0-9, \*, # for entering numbers and telephone number related symbols as claimed), a second selection of keys provided for entering control letters in accordance with said first assigned function (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see QWERTY for entering control letters as claimed), wherein said control letters are control functions in relationship with dialing of a telephone numbers (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see the relationship between QWER and 1, 2, 3, \* or ASDF and 4, 5, 6, #. respectively), wherein said second selection of said keys is comprised by said set of keys, at least one of a plurality of applications executable on said mobile communication device and adapted to switch a keyboard operation mode into a first mode and into a second mode (see column 6, lines 55-62, see "a shift key" and "a special shift key"), wherein said set of keys is operable with said keyboard operation mode being in said first mode (also see column 6, lines 55-62, see "a shift key" and "a special shift key"), and wherein said first selection of keys and said second selection of

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keys are operable with said keyboard operation mode being in said second mode (also see column 6, lines 55-62, see "a shift key" and "a special shift key").

Regarding claim 2, Khoo further teaches a mode selecting key for switching an input mode into a first mode and into a second mode (column 6, lines 55-62, see "a shift key" and "a special shift key", column 11, lines 1-7, see "applications", and see column 1, lines 46-67), the mode selecting key being operable to change modes in at least one of the plurality of applications (column 6, lines 55-62, see "a shift key" and "a special shift key", column 11, lines 1-7, see "applications", and see column 1, lines 46-67), and wherein while the keyboard operation mode is in the first mode: the set of keys each having a first assigned function is operable with the input mode being in the first mode (see column 6, lines 55-62, see "a shift key" and "a special shift key"), and the subset of keys each having a second assigned function is operable with the input mode being in the second mode (see column 6, lines 55-62, see "a shift key" and "a special shift key").

Regarding claim 3, Khoo further teaches a keyboard controller adapted to receive signals from the keyboard and signals from the mode selecting key (column 6, lines 55-62, see "a shift key" and "a special shift key", column 11, lines 1-7, see "applications", and see column 1, lines 46-67), and adapted to generate commands in accordance with the received signals and able to transmit the commands to at least one of the plurality of applications (column 11, lines 1-7, see "applications", and see column 1, lines 46-67), a first set of commands is provided operable with the input mode being in the first mode and the keyboard operation mode being in the first mode, the first set of commands representing the first assigned function of the set of keys (column 11,

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lines 1-7, see “applications”, and see column 1, lines 46-67), and a second set of commands is provided operable with the input mode being in the second mode and the keyboard operation mode being in the first mode, the second set of commands representing the first assigned function of the set of keys (column 11, lines 1-7, see “applications”, and see column 1, lines 46-67).

Regarding claim 5, Khoo further teaches the second assigned function of the subset of keys comprises at least numbers 0 to 9 and symbols "+" "#" and "\*" for entering alphanumeric characters (see fig.2A).

Regarding claim 6, Khoo further teaches the second assigned function of the first selection of keys comprises at least numbers 0 to 9 and symbols "+" "#" and "\*" for entering a telephone number for entering telephone numbers (see fig.2A).

Regarding claim 8, Khoo further teaches the keyboard is substantially arranged as a QWERTY keyboard (see fig.2A, see “QWERTY”).

Regarding claim 9, Khoo further teaches the keyboard comprising the plurality of keys is arranged in stacked rows (see fig.2A).

Regarding claim 12, Khoo further teaches at least a variety of keys of the first and second selection of keys are shaped differently from remaining keys of the keyboard (see fig.2A, see items 210 and 212 keys are shaped differently).

Regarding claim 14, Khoo further teaches a keyboard detector (the teaching of Khoo inherently teaches “a keyboard detector”), wherein the keyboard is detachably connected to the mobile communication device and has a keyboard identification component (see fig.2A and fig.2B, the keypad of items 225 can be detached from items

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224), and the keyboard identification component is adapted to at least the first assigned function and second assigned function of the keys of the keyboard (see fig.2A, keypad with identification).

Regarding claim 16, Khoo further teaches the keyboard identification component is a resistant having a certain pre-determined characteristic (see fig.2A, key qwerty can not be used for dialing).

Regarding claim 17, Khoo further teaches the detachably connected keyboard is adapted to right handed use or left handed use (see fig.2A, keypad can be used for right or left handed and see column 4, lines 57-63, see "left-hand side" and "right-hand side").

Regarding claim 20, Khoo teaches a mobile communication device (see fig.2A), comprising: a set of keys organized as a keyboard (see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit), said set of keys each having a first assigned function for entering alphanumeric text (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see QWERTY for entering control letters as claimed), wherein at least a subset of keys included in said set of keys is arranged in a pre-determined configuration (see fig.2A), keys of said subset each having a second assigned function for entering alphanumeric text (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see "QWERTY" and "1, 2, 3, \*" for entering alphanumeric text), and a plurality of applications executable on said mobile communication device (column 11, lines 1-7, see "applications", and see column 1, lines 46-67), wherein a portion of said keys comprises a first selection of keys of said subset of keys and a second

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selection of keys of said set of keys (see fig.2A), wherein said first selection of keys is provided for entering numbers and telephone number related symbols in accordance with said second assigned function (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see "1, 2, 3, \*"), wherein said second selection of keys is provided for entering control letters in accordance with said first assigned function (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see "QWERTY"), said control letters having a control function in relationship with the entering of telephone numbers (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see "QWER" and "0, 2, 3 and \*". Respectively), at least one of said plurality of applications is adapted to switch a keyboard operation mode into a first mode and into a second mode (also see column 6, lines 55-62, see "a shift key" and "a special shift key"), said set of keys and said at least one subset of keys included in said set of keys are operable with said keyboard operation mode being in said first mode (also see column 6, lines 55-62, see "a shift key" and "a special shift key"), said portion of keys is operable with said keyboard operation mode being in said second mode (also see column 6, lines 55-62, see "a shift key" and "a special shift key"), said device further comprising: a keyboard controller adapted to receive signals from said keyboard and signals from said mode selecting key (fig.5, see "CPU 502" and see column 6, lines 55-62, see "a shift key" and "a special shift key"), and adapted to generate commands in accordance with said received signals and able to transmit said commands to at least one of said plurality of applications (see column 7, lines 35-59 and column 11, lines 1-7,



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see “applications”, and see column 1, lines 46-67), a first set of commands is provided operable with said input mode being in said first mode and said keyboard operation mode being in said first mode (see column 7, lines 35-59 and column 6, lines 55-62, see “a shift key” and “a special shift key”), said first set of commands representing said first assigned function of said set of keys (also see column 6, lines 55-62, see “a shift key” and “a special shift key”), and a second set of commands is provided operable with said input mode being in said second mode and said keyboard operation mode being in said first mode (also see column 6, lines 55-62, see “a shift key” and “a special shift key”), said second set of commands representing said first assigned function of said set of keys (also see column 6, lines 55-62, see “a shift key” and “a special shift key”).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khoo (US 6,867,965) in view of Bentley et al (US 5,727,047).

Regarding claim 7, Khoo teaches claim 1. Khoo does not specifically disclose the control letters comprise a letter "P" for entering a pause control function and a letter "W" for entering a wait control function, wherein the control functions are entered in combination with telephone numbers.

Bentley teaches the control letters comprise a letter "P" for entering a pause control function and a letter "W" for entering a wait control function, wherein the control functions are entered in combination with telephone numbers (see column 8, lines 37-39).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Bentley into the system of Khoo in order to provide one-touch dialing (see Bentley, see column 8, lines 42-44).

7. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khoo (US 6,867,965) in view of Cleveland, Jr. (US 5,476,332).

Regarding claim 10, Khoo teaches claim 1. Khoo does not specifically disclose the keyboard comprises a row including at least two space keys and two shift keys arranged symmetrically.

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Cleveland teaches the keyboard comprises a row including at least two space keys and two shift keys arranged symmetrically (see fig.2, key 30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Cleveland into the system of Khoo in order to select secondary character on the same character key.

Regarding claim 11, Khoo teaches claim 1. Khoo does not specifically disclose the keyboard comprises a row including two mode selecting keys arranged symmetrically.

Cleveland teaches the keyboard comprises a row including two mode selecting keys arranged symmetrically (see fig.2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Cleveland into the system of Khoo in order to make the keyboard more convenient for the user.

8. Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khoo (US 6,867,965) in view of Sood et al (US 6,377,811).

Regarding claim 13, Khoo teaches claim 1. Khoo does not specifically disclose at least a variety of keys of the portion of keys are colored differently from remaining keys of the keyboard.

Sood teaches at least a variety of keys of the portion of keys are colored differently from remaining keys of the keyboard (see column 5, lines 44-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sood into the system of Khoo so that the user can recognize the key more easily.

Regarding claim 15, Khoo teaches claim 1. Khoo does not specifically disclose teaches the detachably connected keyboard is included in a cover being at least a part of a housing of the mobile communication device, wherein the cover is detachably connected to the mobile communication device

Sood teaches the detachably connected keyboard is included in a cover being at least a part of a housing of the mobile communication device (see fig.3, cover 42), wherein the cover is detachably connected to the mobile communication device (see fig.3, cover 42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sood into the system of Khoo in order to protect the mobile communication device.

### ***Allowable Subject Matter***

9. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 4, Makela teaches a mobile communication device of claim 1. Makela fails to teach characterized in that in case the keyboard operation mode is in the second mode: a third set of commands is provided, the third set of commands

representing the second assigned functions of the first selection of keys and  
representing the first assigned functions of the second selection of keys.

10. Claims 18 and 19 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 18, Makela teaches method for controlling an operation of a keyboard of a mobile communication device (see title), characterized by: receiving a keyboard operation mode signal from at least one of a plurality of applications executable on the mobile communication device (see fig.1, see "func" key), switching a keyboard operation mode into a first mode and into a second mode in accordance with the received keyboard operation mode signal; in case the keyboard operation mode is in the first mode: receiving an input mode signal (see fig.1, see "func" key), switching an input mode into a first mode and into a second mode in accordance with the received input mode signal (see fig.1, see "func" key), receiving an input signal (see column 4, line 50 to column 5, line 3), generating a command from the received input signal in combination with the input mode, the command being one of a plurality of commands including a first set of commands generated in the input mode being in the first mode and a second set of commands generated in the input mode being in the second mode (see column 4, line 50 to column 5, line 3), the first set of commands representing first assigned functions of a set of keys of the keyboard (see fig.1, item 2), the second set of commands representing second assigned functions of a subset of keys of the keyboard

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(see fig.1, item3), and transmitting the generated command to at least one of the plurality of applications (see column 4, line 50 to column 5, line 3). Makela fails to teach in case the keyboard operation mode is in the second mode: receiving an input signal, generating a command from the received input signal, the command being one out of a third set of commands, the third set of commands representing the second assigned functions of a first selection of keys of the subset of keys and the first assigned functions of a second selection of keys of the set of keys, and transmitting the generated command to at least one of the plurality of applications.

Regarding claim 19, Khoo teaches a mobile communication device (see Abstract and fig.2A, item 202 and 204 as a single unit), comprising: a set of keys organized as a keyboard, said set of keys each having a first assigned function for entering alphanumeric text (see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit), wherein at least a subset of keys included in said set of keys is arranged in a pre-determined configuration (see fig.2A), keys of said subset each having a second assigned function for entering alphanumeric text (see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit), and a plurality of applications executable on said mobile communication device (see column 1, lines 47-53 and column 11, lines 3-5), characterized in that a portion of said keys comprises a first selection of keys of said subset of keys and a second selection of keys of said set of keys (see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit), wherein said first selection of keys is provided for entering numbers and telephone number related symbols in accordance with said

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second assigned function (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see the relationship between QWER and 1, 2, 3, \* or ASDF and 4, 5, 6, #. respectively), wherein said second selection of keys is provided for entering control letters in accordance with said first assigned function (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see the relationship between QWER and 1, 2, 3, \* or ASDF and 4, 5, 6, #. respectively), said control letters having a control function in relationship with the entering of telephone numbers, at least one of said plurality of applications is adapted to switch a keyboard operation mode into a first mode and into a second mode (also see fig.2A, the link 214 between items 210 and 212, and treat items 210 and 212 as a single unit, and see the relationship between QWER and 1, 2, 3, \* or ASDF and 4, 5, 6, #. respectively), said set of keys and said at least one subset of keys included in said set of keys are operable with said keyboard operation mode being in said first mode (also see column 6, lines 55-62, see "a shift key" and "a special shift key"), said portion of keys is operable with said keyboard operation mode being in said second mode (also see column 6, lines 55-62, see "a shift key" and "a special shift key"), a mode selecting key for switching an input mode into a first mode and into a second mode (also see column 6, lines 55-62, see "a shift key" and "a special shift key"), said mode selecting key being operable to change modes in at least one of said plurality of applications (also see column 6, lines 55-62, see "a shift key" and "a special shift key").

Khoo fails to teach wherein while said keyboard operation mode is in said first mode: said set of keys each having a first assigned function is operable with said input

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mode being in said first mode, and said subset of keys each having a second assigned function is operable with said input mode being in said second mode, said device further comprising: a keyboard controller adapted to receive signals from said keyboard and signals from said mode selecting key, and adapted to generate commands in accordance with said received signals and able to transmit said commands to at least one of said plurality of applications, a first set of commands is provided operable with said input mode being in said first mode and said keyboard operation mode being in said first mode, said first set of commands representing said first assigned function of said set of keys, and a second set of commands is provided operable with said input mode being in said second mode and said keyboard operation mode being in said first mode, said second set of commands representing said first assigned function of said set of keys, wherein in case said keyboard operation mode is in said second mode: a third set of commands is provided, said third set of commands representing said second assigned functions of said first selection of keys and representing said first assigned functions of said second selection of keys.

### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1-3, 5-17 and 20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP



§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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